REMARKS

Claims 1, 24, 26, and 28 have been amended. No claims have been cancelled or added. Hence, Claims 1-29 are pending in the Application.

THE REJECTIONS BASED ON THE PRIOR ART

A. Claim Rejections – 35 USC §102

Claims 1-29 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,405,251 issued to Bullard et al. (*"Bullard"*). This rejection is respectfully traversed.

Claims 1-29

Claims 1, 24, 26, and 28 have been amended to clarify the "bank of addresses," and Applicant believes this amendment is sufficient to place the pending Claims in condition for allowance. However, Applicant will also respond to the arguments presented in the Office Action pertaining to the original Claims to further illustrate that the pending Claims are in condition for allowance.

Claim 28

a)   Applicant respectfully submits that the Office Action does not show that every element of the claim is expressly taught by the cited reference. Therefore, the Office Action fails to present a *prima facie* case of unpatentability, and because the rationale of rejection for Claim 28 is used to support the rejection of Claims 1, 11, 24-27, 29 and by extension the dependent Claims, the rejection of claims 1-29 under § 102(e) is respectfully traversed.

The Office Action combines disparate elements of Claim 28 while leaving out specific limitations. The content of the Office Action is thereby insufficient to enable the

applicants to determine the basis of rejection in a meaningful way, insufficient to

facilitate a reply and fails to present a *prima facie* case of unpatentability.

Specifically, the Office Action does not describe the invention as claimed. Claim

28, which is used as the basis for the rejection of all claims, is presented below as

described in the Office Action, with the text from the original Claim 28 missing from the

Office Action inserted as bold underlined text.

> 28. An apparatus for managing leased network addresses for a plurality of networks using overlapping address spaces, comprising:
>
> a network interface that is coupled to one or more intermediate devices connected to the plurality of networks;
> a processor; and
>
> one or more stored sequences of instructions which, when executed by the processor, cause the processor to carry out the steps of:
>
> storing a plurality of banks of addresses, corresponding to the plurality of networks, wherein at least one particular set of one or more network addresses is included in more than one bank of the plurality of banks;
> receiving a request for a network address for a host on a first network of the **plurality of networks from a relay agent on an intermediate device connected to the first network, the request including a qualifier associated with the first network by the relay agent;**
> based on the qualifier, selecting a first bank of addresses from the plurality of **banks**;
> identifying a first network address from the first bank of addresses based at least in part on the request; and
> sending to the relay agent a response for the host, the response indicating the first network address and the qualifier.

As is shown above, the "host on a first network" is on one of the **plurality of**

networks, and the "request for a network address is **from a relay agent on an**

intermediate device connected to the first network, the request including a qualifier

associated with the first network by the relay agent.

Nowhere in the Office Action is this limitation addressed, because the reference does not describe, teach or suggest the limitation. This is primarily because *Bullard* does not teach a technique for managing available and leased network addresses for multiple networks wherein a configuration server can provide the same network address for several hosts spread over the multiple networks. *Bullard* instead teaches the collection and use of data which can be identified in part by storing the network addresses of the sender and receiver of the data as part of the data.

Regardless, Applicant will address *Bullard* below as applied to the deleted limitations along with the discussion of the entire Claim 28.

(b)   Claims 1-36 are allowable over the cited reference because each of Claims 1-36 recite at least one element that is not disclosed, taught, or suggested by the cited reference.

A claim is anticipated under § 102 only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California,* 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Further, under 37 CFR § 1.104, " when a reference ... describes inventions other than that claimed by the applicant, the particular part relied on must be designated. The pertinence of each reference must be clearly explained and each rejected claim specified."

First, *Bullard* does not disclose the claimed "storing a plurality of banks of addresses, corresponding to the plurality of networks, wherein at least one particular set of one or more network addresses is included in more than one bank of the plurality of banks...." The Office Action cites *Bullard's* use of data collectors, Network Accounting

Records (NARs) and NAR identifiers as anticipating this claim limitation, but provides no reasoning or explanation; therefore, Applicant cannot determine the basis of rejection in a meaningful way. Based on the comma and semicolon structure of the rejection, it appears that the Office Action equates data collectors with NARs, which is incorrect. *Bullard* teaches that "the data collectors 52a-52g collect the data and convert data into normalized records herein referred to as Network Accounting Records (NARs)." (*Bullard*, col. 3, lines 49-51), while NARs are normalized records made up of data collected and converted by the data collectors. (*Bullard*, col. 3, lines 50-51). In any event, the distinction is of no moment.

NARs do not "store a plurality of banks of addresses corresponding to the plurality of networks." The Office Action states "NAR includes a source address and destination address or banks, col 17 lines 6-30." The term "banks" does not appear in the cited portion of the reference; hence, Applicant assumes that the Office Action attempts to apply this part of the reference to the "stor[ing] a plurality of banks of addresses corresponding to the plurality of networks" element of Claim 28. NARs do not store "banks of addresses." *Bullard* makes it clear that the NARs "might include a source address and a destination address, along with a value indicating how long the flow (for the accounting entity) has been in existence." (*Bullard*, col. 17, lines 17-20). A source address and a destination address do not comprise a "plurality of banks of addresses corresponding to the plurality of networks" under any reasonable interpretation of the terms. Even if a source address and a destination address could comprise a "bank," there is no teaching or suggestion in *Bullard* that a NAR stores more than <u>one</u> source address and destination address, which would be required for "stor[ing] a <u>plurality of banks</u> of addresses."

As for the "data collectors," *Bullard* does not teach that the "data collectors" store anything, much less a plurality of banks of addresses corresponding to the plurality of networks. Instead, *Bullard* teaches that "The data collectors 52a-52g (FIG. 2) are <u>oriented around the process of filling in the NAR</u> [which stores at most one source address and destination address]. The metrics are left <u>untouched by the data collector and are passed transparently into the accounting process flow aggregation process</u> 60. The data collectors 52a-52g assign the accounting entity identifiers 202 to the metrics e.g., a source and a destination identifier to the metric." (*Bullard*, col. 10, line 63 – col. 11, line 2).

Next, *Bullard* does not teach, suggest or disclose a method or apparatus for "managing leased network addresses for a plurality of networks using overlapping address spaces." The Office Action cites the following passage from *Bullard* in support:

> Still referring to FIG. 18, the NAR1508 has an IP-to-username mapping 512 and an accounting interval 516 comprising a start time and a session time to indicate a time interval bounded by start time "T1" and a start time+session time ("T2"), that is, the accounting interval represents a start time and a stop time. The username 524 in the IP address-to-username mapping is supplied by the DHCP server 500. In the FAP, this NAR1 information will either go directly to a correlation function or to the local store (which could either be a database, file or memory), where it can be directly accessed by the correlator function. The NAR2510 has an accounting entity ID 514, a T3-to-T4 accounting time interval 518 and a metric 530. The accounting entity identifier 514 has two IP addresses 526, 528, one corresponding to a source IP address and the other corresponding to a destination IP address. **The NAR2502 is passed to the correlator 442, which determines that the T1-to-T2 time interval 516 from the IP-to-username address map in the NAR1508 overlaps or in some way relates to the T3-to-T4 time interval 518 of the NAR2510.** The correlator determines that T1, T2, T3 and T4 are related, and that the IP address 522 in the IP-to-username address mapping 512 is associated with one of the two IP addresses 526, 528 in the NAR2510. Thus, the FAP enhances the NAR2510 by inserting information from the accounting entity ID 512 (of NAR1508) into the accounting entity ID portion of the NAR2510. The resulting, enhanced NAR2532 has an enhanced accounting entity ID 534 that includes the T3-to-T4 timestamp (not shown), the IP-to-IP addresses 526-528 and the username 524. Thus, the enhanced NAR2

now has a mapping between the username and the one of the IP addresses 526, 528 that is related to the IP address 522. The metric 530 is unchanged. (*Bullard*, col. 20, lines 13-45).

The only time the word "overlap[s]" appears in the cited portion above is highlighted in bold underlined text. As the highlighted text indicates, *Bullard* teaches determining whether a time interval overlaps with another time interval. Figure 18 of *Bullard* reinforces that time intervals do not include network addresses, because the time intervals (516, 518 as cited above) are distinct and separate from IP addresses (522, 526, 528). This is unrelated to "managing leased network addresses for a plurality of networks using overlapping address spaces." Further, neither the word "leased" nor the concept of leased network addresses appears in *Bullard* at all. This is because *Bullard* is not directed to, and therefore does not teach, a method or apparatus for managing leased addresses; rather, *Bullard* is directed to accounting processes, not managing (assigning addresses and storing banks of addresses) network addresses.

Next, *Bullard* does not teach "receiving a request for a network address for a host on a first network of the **plurality of networks from a relay agent on an intermediate device connected to the first network, the request including a qualifier associated with the first network by the relay agent** (deleted text in the Office Action indicated by bold underlined text). The portions of the reference cited for this limitation do not teach "receiving a request for a network address" in any way. In Bullard, network addresses are not requested, they are collected and stored in "Accountable Entity Identifiers." "Referring now to FIGS. 11A-11E, Accountable Entity Identifier data structures are shown. The Accountable Entity Identifiers are a collection of entity description attributes that together identify an accountable entity in the accounting process 14." (*Bullard*, col. 12, lines 60-64).

Next, the Office Action equates a router with a "relay agent." This contention is incorrect, but even if a router was a "relay agent" as claimed, *Bullard* does not teach, suggest or disclose a router "receiving a request for a network address for a host on a first network of the **plurality of networks from a relay agent on an intermediate device connected to the first network**." Even if there were a request for a network address, *Bullard* teaches that a "data collector" requests the network address, not a router, and certainly not a "relay agent" as claimed.

Next, the "qualifier" in *Bullard* is not "**associated with the first network by the relay agent**." Instead, it is assigned by the data collectors as part of the NARs. This is demonstrated by the following passages from *Bullard*:

"As shown in FIG. 8B, the Network Accounting Record Identifier 202 (NAR_ID) is a set of objects within the NAR that uniquely identifies the NAR throughout the accounting process 14." (*Bullard*, col. 11, lines 16-19)

"[T]he NAR Identifier 202 provides database constructs to a NAR, whereas, the plurality of Network Accounting Record Attributes 204a-204n provide the actual metrics used for network activity reporting and network accounting." (*Bullard*, col. 11, lines 11-15).

"Referring now to FIG. 11A, a NAR_USERNAME is a specific type of NAR_USERID data structure. A system string type "Username" 222 can represents a real accountable user within the accounting process 14. The NAR_USERNAME data structure 220 is used to transmit the string. The semantics can be applied when the string "Username" 222 is supplied by RADIUS or from DCHP management systems. The NAR_USERNAME data structure 220 includes a NAR_USERNAME NAR_ATTR Qualifier..." (*Bullard*, col. 13, lines 41-49).

"The data collectors 52a-52g assign the accounting entity identifiers 202 to the metrics e.g., a source and a destination identifier to the metric." (*Bullard*, col. 10, line 67 – Col. 11, line 2).

Because the cited reference does not teach every element of the claimed invention, the rejection of Claim 28 is respectfully traversed.

B. Claim Rejections – 35 USC §103

Claims 1-29 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,405,251 issued to Bullard et al. ("*Bullard*"). This rejection is respectfully traversed.

Claims 1-29

Claims 1, 24, 26, and 28 have been amended to clarify the "bank of addresses," and Applicant believes this amendment is sufficient to place the pending Claims in condition for allowance. However, Applicant will also respond to the arguments presented in the Office Action pertaining to the original Claims to further illustrate that the pending Claims are in condition for allowance.

Claim 28

a)   Claim 28, and by extension, Claims 1-27 and 29 are allowable over the cited reference because each Claim 28 contains at least one element that is not disclosed, taught, or suggested by the cited reference, the cited reference has not been properly combined with any other reference, and the Office Action fails to demonstrate a suggestion to combine. The reasoning for this assertion is the same as in section A above.

C.   Dependant Claims

The pending claims not discussed so far are dependant claims that depend on an independent claim that is discussed above. Because each of the dependant claims include the limitations of claims upon which they depend, the dependant claims are patentable for at least those reasons the claims upon which the dependant claims depend are patentable. Removal of the rejections with respect to the dependant claims and allowance of the dependant claims is respectfully requested. In addition, the dependent claims introduce additional limitations that independently render them patentable. Due to the fundamental differences already identified, a separate discussion of those limitations is not included at this time.

For the reasons set forth above, Applicant respectfully submits that all pending claims are patentable over the art of record, including the art cited but not applied. Accordingly, allowance of all claims is hereby respectfully solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Respectfully submitted,

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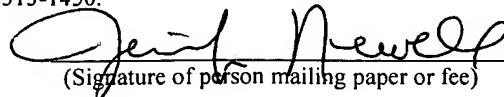**EXPRESS MAIL CERTIFICATE OF MAILING**

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